

Rhogeessa mira.

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Published 9 May 1997 by the American Society of Mammalogists

Rhogeessa mira LaVal, 1973

Least Yellow Bat

Rhogeessa mira LaVal, 1973:26. Type locality "20 km N El Infiernillo, Michoacán, México, elevation 125 m."

CONTEXT AND CONTENT. Order Chiroptera, Suborder Microchiroptera, Family Vespertilionidae. The genus *Rhogeessa* includes two subgenera and ten species (LaVal, 1973; Genoways and Baker, 1996). *R. mira* is a member of the nominate subgenus, is monotypic, and is assigned to the *tumida-parvula* complex (Baker et al., 1985).

DIAGNOSIS. *Rhogeessa mira* is the smallest species in the genus (greatest length of skull averaging 11.4 mm—Fig. 1). Compared to other species it has a smooth lingual cingulum on the upper canine that lacks cusps, and i3 only slightly smaller than i2. Other species of *Rhogeessa* are larger (greatest length of skull averaging ≥ 11.9 mm), and the lingual cingulum of c1 is not smooth, and cusps usually are present (LaVal, 1973). Hairs on the dorsal pelage are medium in length (4 mm). The skull is small, with forehead slope moderate (Fig. 1), and external characteristics much as in *R. parvula*.

GENERAL CHARACTERS. External and cranial measurements (in mm) of the holotype are: total length, 70; length of tail, 33; length of hind foot, 6; length of ear, 12; length of forearm, 26.2; length of the third metacarpal, 26.1; length of tibia, 10.4; greatest length of skull, 11.1; depth of braincase, 4.3; postorbital width, 2.6; mastoid width, 6.0; width across second upper molars, 4.5; width of second upper molar, 1.0; length of maxillary tooththrow, 3.8. Mean values (in mm) for 14 specimens are: length of forearm, 26.0; length of third metacarpal, 25.4; greatest length of skull, 11.4; depth of braincase, 4.4; postorbital width, 2.8; mastoid width, 6.2; width across second upper molars, 4.6; width across the canines, 3.2; length of maxillary tooththrow, 3.9 (LaVal, 1973). Mean values (in mm) and range (in parentheses) for eight adults specimens from La Salada, Michoacán are: total length, 66.2 (64–70); length of tail, 29.8 (27–32); length of hind foot, 5.3 (5–6); length of ear, 11.7 (11–13); length of forearm, 26.0 (25.1–27.1); length of tibia, 11.0 (10.5–11.6); greatest length of skull, 11.0 (10.7–11.5); postorbital width, 4.0 (3.8–4.2); mastoid width, 6.0 (6–6.1); width across second upper molars, 4.5 (4.4–4.7); length of maxillary tooththrow, 3.7 (3.7–3.9—Villalpando-R. and Arroyo-Cabrales, 1996).

In *R. mira* the distal one third of the dorsal hairs are buckthorn brown to buffy brown. The basal two thirds are more buffy than the tips, but not contrasting strongly with the tips. The ventral color is like the bases of dorsal hairs, but the tips are not contrasting. Sparse fur on the dorsum of the uropatagium extends to or past the knees. The skull lacks a sagittal crest. The lingual cingulum of c1 is smooth and lacks the slightest suggestion of cusps (LaVal, 1973).

DISTRIBUTION. *Rhogeessa mira* is endemic to a small area between the small towns of El Infiernillo and Zicuirán in the semiarid lower region of the Balsas River, Michoacán, Mexico (Fig. 2). It has been found from 125 to 200 m (LaVal, 1973; Polaco and Muñoz-Martínez, 1987; Villalpando-R. and Arroyo-Cabrales, 1996). No fossils are known.

FORM. The small baculum is similar to that of *R. parvula*, with length 0.66 mm, depth 0.12 mm, and width 0.34 mm. Individual scales on the hair are rotated 90° along its linear axis in relation to adjoining scales. This condition resembles *R. parvula* and is not seen in the others species of the genus (LaVal, 1973).

ECOLOGY. Ten specimens were caught in mist nets over a

small cement water trough located 7 km N El Infiernillo in cactus-mesquite vegetation (Alvarez and Aviña, 1965). One female (Fig. 1) was collected to 19.5 km N, 8.3 km W El Infiernillo, over a stream in a gallery forest. Eight specimens were captured in mist nets over a small stream in arid thorn scrub vegetation in La Salada, 4 km S, 5 km E Zicuirán (Villalpando-R. and Arroyo-Cabrales,



FIG. 1. Dorsal, ventral, and lateral views of cranium, and lateral view of mandible of *Rhogeessa mira*, from 19.5 km N, 8.3 km W El Infiernillo, Michoacán, Mexico (female, DP-6036). Greatest length of skull is 10.9 mm.

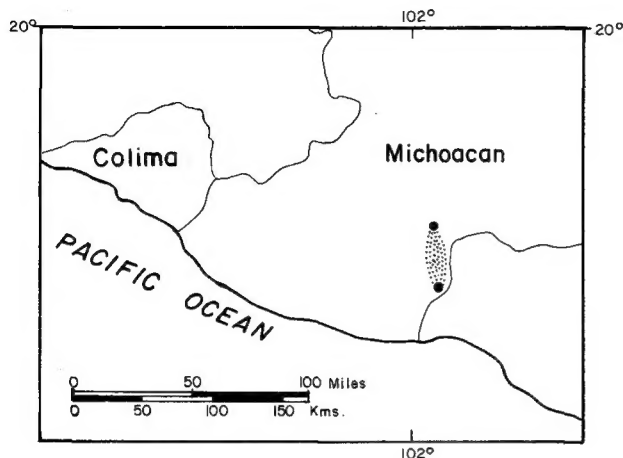


FIG. 2. Geographic distribution of *Rhogeessa mira*. Drawing by Guillermo Herrera-Carvajal.

1996). Conditions for the holotype and other three specimens are unknown. Other bats collected with *R. mira* include *Balantiopteryx plicata*, *Pteronotus parnellii*, *Micronycteris megalotis*, *Macrotus waterhousii*, *Desmodus rotundus*, *Glossophaga comissaris*, *G. morenoi*, *G. soricina*, *Leptonycteris curasoae*, *Artibeus hirsutus*, *A. jamaicensis*, *Lasiurus borealis*, *Myotis fortidens*, *R. alleni*, *R. tumida*, and *Eumops glaucinus* (LaVal, 1973; Villalpando-R. and Arroyo-Cabrales, 1996). At 7 km N El Infiernillo, *R. mira* was captured with two other species of *Rhogeessa*, suggesting partitioning of the feeding niche, possibly based on prey size (LaVal, 1973).

REMARKS. *Rhogeessa mira* is a species considered rare by the Mexican government (Diario Oficial de la Federación, 1994). Allen (1866) did not give the etymology of the new generic name *Rhogeessa*. Álvarez-Castañeda and Álvarez Solorzano (1996) do not report the etymology, but considered that the generic name was dedicated to a person. The word *mira* is from the Latin *mirus* meaning wonderful, astonishing, or extraordinary (LaVal, 1973).

LITERATURE CITED

- ALLEN, H. 1866. Notes on the Vespertilionidae of tropical America. Proceedings of the Academy of Natural Sciences of Philadelphia, 18:279–288.
- ALVAREZ, T., AND C. AVIÑA. 1965. *Baeodon* [sic] *alleni*, *Rhogeessa tumida major* and *R. p. parvula* newly reported for Michoacan, with notes on the qualitative differentiation of the two *rhogeessas*. The Southwestern Naturalist, 10:75–76.
- ÁLVAREZ-CASTAÑEDA, S. T., AND T. ÁLVAREZ SOLÓRZANO. 1996. Etimologías de los géneros de mamíferos mexicanos. Ciencia, México, 47:39–49.
- BAKER, R. J., J. W. BICKHAM, AND M. L. ARNOLD. 1985. Chromosomal evolution in *Rhogeessa* (Chiroptera: Vespertilionidae): possible speciation by centric fusions. Evolution, 39: 233–243.
- DIARIO OFICIAL DE LA FEDERACIÓN. 1994. Norma Oficial Mexicana NOM-059-ECOL-1994, que determina las especies y subespecies de flora y fauna silvestres terrestres y acuáticas en peligro de extinción, amenazadas, raras y las sujetas a protección especial, y que establece especificaciones para su protección. México, D. F., 488(10):2–60.
- GENOWAYS, H. H., AND R. J. BAKER. 1996. A new species of the genus *Rhogeessa*, with comments on geographic distribution and speciation in the genus. Pp. 83–87, in Contributions in mammalogy: a memorial volume honoring Dr. J. Knox Jones, Jr. (H. H. Genoways and R. J. Baker, eds.). Museum of Texas Tech University, 315 pp.
- LAVAL, R. K. 1973. Systematics of the genus *Rhogeessa* (Chiroptera: Vespertilionidae). Occasional Papers of the Museum of Natural History, The University of Kansas, 19:1–47.
- POLACO, O. J., AND R. MUÑOZ-MARTÍNEZ. 1987. Los murciélagos de la costa de Michoacán, México. Anales de la Escuela Nacional de Ciencias Biológicas, 31:63–89.
- VILLALPANDO-R., J. A., AND J. ARROYO-CABRALES. 1996. Una nueva localidad para *Rhogeessa mira* (Chiroptera: Vespertilionidae) en la cuenca baja del río Balsas, Michoacán, México. Vertebrata Mexicana, 2:9–11.
- Editors of this account were DUKE S. ROGERS, ELAINE ANDERSON, AND KARL F. KOOPMAN. Managing editor was BARBARA H. BLAKE.
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